

**PERSONALITY PROTOTYPES AMONG HIGH-ACHIEVING BLACK  
UNDERGRADUATES**

A Dissertation

by

LAURA CATHERINE PRUITT-STEPHENS

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of  
**DOCTOR OF PHILOSOPHY**

August 2012

Major Subject: Counseling Psychology

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Approved by:

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## **ABSTRACT**

Personality Prototypes among High-Achieving Black Undergraduates.

(August 2012)

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Co-Chairs of Advisory Committee: Dr. Timothy R. Elliott  
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Personality prototypes have gained more attention as a unit of personality analysis in the past decade. However, relatively few studies have looked at the personality structure of ethnic minorities in general and Black/African Americans specifically using this method of analysis. Further, research relating to high achieving Black/African American undergraduates is also sparse. Thus, the current study utilizes the personality prototypes methodology among a large Black/African American sample. A measure of workplace personality was utilized to explore the replicability of the prototypes. Participants included ( $n = 951$ ) high achieving Black/African American undergraduates from top-tier universities. Findings show the three personality prototypes as described by Kurt Lewin as well as Jack Block and Jeanne Block could be derived among a large Black/African American undergraduate sample utilizing a measure of workplace personality. Analysis yielded three clusters that fell into the high, medium, and low range. Cumulative grade point averages (CGPA) of the participants by gender

and cluster type were analyzed via k-means to develop a prototypic outline of the three personality prototypes (i.e., resilient, undercontrolled, and overcontrolled). To increase confidence in the clustering solution a Two Step clustering method was performed and yielded the same interpretative results. Profiles were developed by exploring the definitions for each of the three prototypes as well as the WPI relevant work behaviors which were used as a comparative guide to interpret the meaning of the high, medium, and low cluster scores. Statistical significance of gender and CGPA were established. Gender was found to be statistically significant at the ( $p = .02$ ) level. Also statistically significant was the cluster membership at ( $p = .05$ ). Due to the size of the sample, there was substantial predictive power at .763 and .616 respectively to ascertain even small variances. However, there was no detected interaction effect between the CGPA, gender, and cluster membership. The implications of the current study may have far reaching effects. Based upon the findings of the current study it is possible to further glean understanding of the results by placing them in the context of educational theory. Thus, the practical implications and limitations are discussed along with areas for future research consideration.

## **DEDICATION**

I dedicate this project first and foremost to my Lord and Savior Jesus Christ. It was my faith and the Word of God that kept me throughout this journey.

To my husband, Reginald you had my back and believed in me even when I didn't believe in myself and wanted to give up. Your unconditional love and support made this degree a possibility. I don't know what I would have done without you keeping me sane through all the heartaches, heartbreaks, setbacks, and triumphs. You are truly my friend, partner, and love of my life.

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## TABLE OF CONTENTS

	Page
ABSTRACT .....	iii
DEDICATION .....	iv
ACKNOWLEDGEMENTS .....	v
TABLE OF CONTENTS .....	vii
LIST OF FIGURES .....	ix
LIST OF TABLES .....	x
 CHAPTER	
I INTRODUCTION .....	1
Overview of Personality Prototypes .....	1
Overview of Black/African American Undergraduate Academic Achievement .....	3
Overview of High Academic Achievement Theory .....	6
Overview of Workplace Personality .....	7
Overview/Purpose of the Current Study .....	7
Proposed Research Questions .....	8
Current Study Hypotheses .....	9
Key Terms and Definitions .....	9
II LITERATURE REVIEW .....	12
Introduction .....	12
Theoretical Framework of Personality Prototypes .....	12
High Achieving and Gifted Black/African American Undergraduates .....	21
Workplace Personality Relevance .....	25
Personality Prototypes and Educational Theory .....	25
Integrative Summary and Hypotheses .....	28

	Page
III      METHODOLOGY .....	32
Participants .....	32
Measures .....	32
Procedures .....	34
IV      RESULTS.....	37
Prototypic Cluster Profiles .....	37
V      DISCUSSION AND CONCLUSIONS.....	41
Goals.....	41
Implications of Study .....	43
Limitations of Study.....	44
Areas of Future Research .....	45
REFERENCES .....	49
APPENDIX A .....	60
APPENDIX B .....	69
VITA .....	78

## LIST OF FIGURES

	Page
Figure 1 Illustration of Resilient Prototype .....	61
Figure 2 Illustration of Undercontrolled Prototype .....	62
Figure 3 Illustration of Overcontrolled Prototype .....	63
Figure 4 Applied Three Ring Conception of Giftedness among Resilient Personality Prototype .....	64
Figure 5 Applied Three Ring Conception of Giftedness among Undercontrolled Personality Prototype .....	65
Figure 6 Applied Three Ring Conception of Giftedness among Overcontrolled Personality Prototype .....	66
Figure 7 Percentages of the Cluster Breakdown by Gender .....	67
Figure 8 Clusters by Gender, Above and Below 3.0 CGPA .....	68

## LIST OF TABLES

	Page
Table 1   Final Cluster Centers .....	70
Table 2   Workplace Personality Inventory List of Relevant Behaviors .....	71
Table 3   Frequencies by Cluster .....	72
Table 4   Main and Interaction Effects between CGPA, Gender, and Cluster .....	73
Table 5   Mean and Standard Deviation of CGPA by Gender and Cluster .....	74
Table 6   Two-Step Centers - Means and Standard Deviations.....	75
Table 7   Post Hoc Testing .....	77

## INTRODUCTION

*"I want freedom for the full expression of my personality."*  
*Mahatma Gandhi*

### Overview of Personality Prototypes

From observations in everyday life, the complexities of human endeavors seem endless whether examining a child, adolescent, or adult (Van Leeuwen, Fruyt, & Mervielde, 2004). Individual differences such as how one thinks, feels, and behaves have long intrigued psychologists interested in the descriptive, predictive, and explanatory power of an individual's personal characteristics (Steca, Alessandri, Vecchio, & Caprara, 2007). The compilation of individual characteristics is typically thought of as personality (Allport, 1937). Different kinds of traits within the individual are what personality theory is all about (Robins, John, Caspi, Moffitt, & Stouthamer-Loeber, 1996). According to Asendorpf, Borkenau, Ostendorf, & Van Aken (2001) and for the purposes of this dissertation study, personality is defined as an individual's active attempt to use psychophysical systems to organize the self and make adjustments to the environment.

In recent years, there have been two primary camps of approaches to studying personality. The camps can be delineated based on the type of analysis used. For instance, the variable approach uses a small number of trait dimensions (e.g., Big Five

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This dissertation follows the style of *Adult Education Quarterly*.

Model consisting of openness, conscientiousness, extroversion, agreeableness, and neuroticism) to explain a wide variety of individual characteristics. For decades, scholars in personality research have typically distilled the seemingly infinite number of characteristics or traits upon which persons differ into the “Big Five” system of classifying personality (Steca, et. al., 2007). The Big Five model is the most commonly used and accepted classification system of understanding personality (Steca, et. al., 2007). However, Block (1971) and other researchers (Asendorpf, et. al., 2001; Asendorpf & van Aken, 1999; Caspi & Silva, 1995) have since pointed out that examining personality via a variable approach may limit understanding and may cause researchers to miss important aspects of individuals. Thus, a person-centered approach has been proposed.

The person-centered or typology approach takes into consideration a configuration of traits within the individual (Robins, et. al., 1996). With this in mind, research using the person-centered approach focuses on an assemblage of traits used to define each person while acknowledging that the traits work in a dynamic and integrative fashion (Block & Block, 1980). That is, individuals can share similarities in basic personality structure which can then be categorized into the prototypes termed resilient, overcontrolled, and undercontrolled (Robins, et. al., 1996). Further, it is important to distinguish that the variable-centered and person-centered approaches are not in competition but rather provide complimentary, inclusive, and extended views of the complexity found within our understanding of personality systems (Robins, et. al., 1996). The current study will demonstrate the utility of how both approaches can be used

in conjunction to expand our understanding of personality. To demonstrate the efficacy of both approaches, the current study utilizes a workplace personality instrument (i.e., WPI) that was developed within the framework of several personality measures (Orozco, 2011).

Typically, personality prototypes are interpreted according to Block's Theory of Ego Control and Ego Resiliency Model (1980). The types proposed by Block (1971) and Block & Block, (1980) and others focus on three primary personality types which include resilient, overcontrolled, and undercontrolled. A thorough discussion of the tenets of Block's theory and its underlying principals can be viewed later in this document. However, there is evidence indicating that people who are resilient tend to have a greater capacity for adjusting to ambiguous circumstances (Berry, Elliott, & Rivera, 2007). Those who typically display a variety of externalizing behaviors such as impulsivity are likely to have an undercontrolled personality style while those more inclined to experience internalizing behaviors such as rigidity are likely to be considered overcontrolled (Berry & Schwebel, 2009).

### **Overview of Black/African American Undergraduate Academic Achievement**

Why do some Black/African American students successfully navigate college and others do not (Hebert, 2002)? Many studies have sought to answer this question by focusing on deficit based explanations such as underachievement (Fries-Britt, 1997) or propose insufficiency based explanations such as innate biological deficits (Herrnstein & Murray, 1994). Other researchers emphasize that the explanation often has less to do with preparation or ability and is related to social and environmental factors such as

stressors, racial discrimination and lower socio-economic status (Brooks-Gunn, Klebanov & Duncan, 1996; Sandler, Silverberg, & Hall, 1996; Steele, 1999). For instance, the campus climate literature reports significant correlations between drop-out rates and ethnic minority college students due to students feeling unwelcomed (McClellan, Cogdal, Lease & Londono-McConnell, 1996) or experiencing micro-aggressions (Sue, Capodilupo & Holder, 2008). In addition, studies have implicated issues of school level factors, such as teacher quality or classroom size (Bali & Alvarez, 2003; Meier, Wrinkle, & Polinard, 1999) and lack of administrative support (Robinson, 2002). Hughes and Bonner (2007) highlighted structural inequalities which lead to teacher tendencies to pathologize African American males early in their educational careers. Other research suggests that racial identity (Ford, 1995; Ford, Harris, & Schuerger, 1993; Smith, 1989) and scholar identity have significant impact on achievement and attitudes towards school (Whiting, 2006). In fact, as Harper, (2008) suggests, when considering the aggregation of higher education literature it is riddled with deficit based and/or a *what's wrong* approach particularly when related to Black/African Americans. While all of these issues are indeed important, Harper suggests there is another way to conceptualize the research in this topic area by focusing on *what's right*.

Harper (2010) promotes using an anti-deficit achievement framework among students of color in STEM (Science, Technology, Engineering, & Mathematics) fields and challenges other researchers to explore and use reframing as a method of producing anti-deficit research questions. The theoretical underpinnings of Harper's anti-deficit



achievement framework are taken from related psychological, sociological, and educational concepts. Harper is not alone in calling for a different research approach in education.

The images created of Black men in our society often confine them to environments shaped by drugs, crime, athletics, and academic failure. In education, we have contributed to this negative portrait by the disproportionate amount of research that emphasizes remediation and disadvantage (Fries-Britt, 1997, p. 65).

Thus, rather than explore deficit based research, why not reframe the questions to take into account those who have maintained to matriculate, attained academic achievements, and beat the surmounting odds against them? Relatively few studies have taken on an academic achievement where the focus is on Black/African Americans in general (Freeman, 1999; Fries-Britt 1998, 2002, 2004; Fries-Britt & Turner 2001, 2002; Griffin 2006). Others focus on high academic achieving Black/African American males, specifically (Bonner, 2010, 2001; Harper, 2010, 2009, 2008, 2005). In addition, there is research that recommends the necessity of recognizing and supporting giftedness and academic achievement early on and continuing support throughout college (Ford, Moore, & Whiting, 2006; Fries-Britt, 1997; Hebert, 2002; Robinson, 2002).

The line of research concerning Black/African Americans and high academic achievement is important because as Brown and Jones, (2004) note, education is the primary tool toward achieving employment and economic stability. Taken together, the compilation of research in this area is intriguing and informative. However, the original question of why do some Black/African American students successfully navigate college and others do not is still largely unanswered. Quite possibly, the answer may be due to a

function of personality. Thus, the current study is among the first to look at the potential relationship between workplace personality, personality prototypes, and high academic achievement among Black/African American undergraduates.

### **Overview of High-Academic Achievement Theory**

The current study is focused upon attempting to better understand personality prototypes among high academic achievers. In order to accomplish this goal it is necessary to explore how theories of personality and high academic achievement relate to one another. Renzulli's three-ring conception of giftedness provides an avenue from which to conceptualize the inner relationship of both constructs. Lewin (1935) speaks of the dynamic and integrative psychical system in his conception of personality as the interaction between one's innate psychical system and one's environment which creates a pattern of behaving. Likewise, the cluster of traits making up the notion of giftedness includes both innate and environmental interactions as above-average ability, task commitment, and creativity. These factors also are thought to work in dynamic and integrative fashion and serve to describe general and specific areas of human performance (Renzulli, 2006). Renzulli postulated that while abilities such as general intelligence and aptitude remain relatively stable over time it is creativity and task commitment that are contextual, situational, temporal, and environmentally based (Renzulli, 2006). Depending upon one's personality prototype would then determine as to the level and degree of interaction between the innate and external cues. Over time an established pattern of behaving emerges. Likely, this is why creativity and task

commitment are thought to be less stable over time; however, accounts for greater levels of high achievement (Renzulli, 2006).

“...beyond a certain level of general ability, real-world achievement is less dependent on ever increasing cognitive ability than on other personal and dispositional factors (e.g., task commitment and creativity)”  
(Renzulli, 2006, p. 227)

### **Overview of Workplace Personality**

High academic achievement can be critical to professional and fiscal upward mobility (Pindus, Flynn, & Nightingale, 1995). Currently, our understanding of how personality functions in relation to the work environment is limited. There is no clearly defined construct of workplace personality that explains work behaviors consistently and effectively (Orozco, 2011). Thus, it is important to explore this understudied yet essential dimension of personality within the larger context of the workplace.

### **Overview/Purpose of Current Study**

The current study attempts to marry a few understudied yet critical domains that concern the Black/African American undergraduate population. Specifically, two domains of interest include personality prototypes and high academic achievement. Though few in numbers, some studies of personality types include black participants; however, as Robins, et. al., (1996) warn there are dangers in including “small and possibly unreplicable groupings of individuals.” York and John (1992) suggest that it is necessary to implement strict criterion of replicability in order to generalize across random subsamples in determining personality prototypes. The author found no studies conducted which focused primarily on personality prototypes among Black/African American undergraduates (Robins, et. al., 1996). Thus, to alleviate these issues and add

to the scholarly record, the current study seeks to explore personality prototypes among a large heterogeneous group of high achieving Black/African American undergraduates. In this study, high achievement is defined as Black/African American undergraduates who have matriculated from four-year degree granting top-tier academic institutions.

Whiting (2006) postulated that the achievement gap, underrepresentation in gifted programs, and academic disengagement are common factors among Blacks/African Americans students. With this in mind, the current study proposes to shed light on our understanding of how personality may play a role in Black/African American academic achievement among undergraduates. The author hopes that by exploring a large heterogeneous group of Black/African American college undergraduates it may be possible to increase our knowledge concerning this population. Illuminating the issues surrounding personality and academic achievement may shed light upon the original question regarding how some Black/African American students come to navigate college and others do not.

### **Proposed Research Questions**

The proposed study will attempt to answer the following research questions:

- 1) Are the three personality prototypes as described by Block & Block, (1980) present among Black/African American undergraduates on a measure of workplace personality?
- 2) Does the distribution of personality prototypes differ by gender?

- 3) Does high academic achievement as defined by cumulative academic grade point average (i.e., 3.0 or above) differ as a function of personality prototype and/or gender?

### **Current Study Hypotheses**

The hypotheses associated with the current study include the following:

- 1) There are differences between personality prototypes as seen in the raw scores of the WPI.
- 2) There are no gender differences between the personality prototypes.
- 3) There are CGPA differences between personality subtypes.
  - a. Individuals within the Resilient cluster maintain higher CGPA's on average than do the Undercontrolled prototype.
  - b. Individuals within the Overcontrolled cluster maintain a higher CGPA among all the clusters.
  - c. Individuals within the Undercontrolled cluster maintain the lowest CGPA's among all the clusters.

### **Key Terms and Definitions**

*Black/African American* is a self-determined reference associated with one's sense of racial or ethnic identity. The term Black or African American is typically associated with persons of African descent and/or those of African descent who have received a significant portion of their socialization in the United States (Sellers, Smith, Shelton, Rowley, & Chavous, 1998).

*Personality* is typically thought of as a relatively enduring pattern of behavior. For the purposes of this dissertation study, personality is defined as an individual's active attempt to use psychophysical systems to organize the self and make adjustments to the environment (Asendorph, Borkenau, Ostendorf, & Van Aken (2001).

*High Academic Achievement* is a relative term that carries with it no agreed upon definition. The current study uses the CGPA along with the knowledge that all participants have matriculated from four-year degree granting top-tier academic institutions. Given the vast amount of literature on the post-secondary achievement gap between Black/African Americans and their White counterparts, such as “more than two-third of all African-American males who begin college never finish” (Harper, 2005) this author maintains all the participants have indeed proven they are high-achieving.

*Variable approach to personality* is typically considered as the most widely accepted and most used classification system of understanding personality (Steca, et. al, 2007). The Big Five model describes the degree to which persons functionally differ on the areas of openness, conscientiousness, extraversion, agreeableness, and neuroticism.

*Person-centered or Typology approach to personality* takes into consideration a configuration of traits within an individual (Robins, et. al., 1996). Thus, the person-centered approach focuses on an assemblage of traits used to define each person while acknowledging that the traits work in a dynamic and integrative fashion (Block & Block,

1980). That is, individuals can share similarities in basic personality structure which can then be categorized into prototypes mainly described as resilient, overcontrolled, and undercontrolled (Robins, et. al., 1996).

*Workplace Personality Inventory (WPI)* is a measure is based upon the Work Styles personality taxonomy (Borman, Kubisiak, & Schneider, 1999) and is endorsed by the U.S. Department of Labor as evidenced by its inclusion in the Occupational Information Network (O\*NET) online database. The measure contains 175 items using a four point Likert-type scale which assess sixteen work-related personality traits within seven broad domains shown to be correlated with job behaviors.

*Renzulli's Three-Ring Conception of Giftedness* provides a framework from which to understand and interpret the concept of personality in an academic achievement oriented setting. Renzulli's theory espouses the interaction between and among three clusters of traits (e.g. above average ability, creativity, and task commitment) all of which are considered relevant when addressing particular problem situations that create the conditions for the commencement of the creative productive process (Renzulli, 2006). Renzulli's theory fits and expands the current view of personality within the present study.

## **LITERATURE REVIEW**

### **Introduction**

Over the last several decades, researchers have looked at a number of predictors of undergraduate achievement. One major component used to predict academic success has been personality traits (Ridgell & Lounsbury, 2004). However, the majority of the personality research conducted used either the Five Factor Model or the Big Five as a means to interpret a wide variety of individual differences of personality traits (Orozco, 2011). Although the person-centered or typology approach to understanding personality is growing in popularity, there have been no studies to our knowledge that have focused on understanding undergraduate achievement among Black/African Americans using this method of analysis.

### **Theoretical Framework of Personality Prototypes**

The person-centered or typological approach to personality is not a new concept; its roots have been dated back to ancient Greece (Ussher, 1960, as cited in Robins, et. al. 1996). *A dynamic theory of personality: Selected papers*, Lewin (1935) explains his views on the structure of the mind and makes it a point to note the importance of psychical events and the typological approach to personality.

...however high one may estimate the degree of unity in a psychical totality, the recognition that within the mind there are regions of extremely various degrees of coherence remains an exceedingly important condition of more penetrating psychological research (p. 57).

“Psychical” events are described as dynamic in nature and viewed as “the concept of energy...of force, of tension, of systems... (p. 46).” Lewin makes important distinctions between “psychical sources of energy or psychological reality” (pp. 46-47) and the



physical and perceptual world. He goes on to report that “psychical systems are related in part to the ontogenetic development of the mind (p. 58). In his proposal of a systematic representation of the psychological system of the individual and environmental influences, he states:

...each single everyday experience of the past may somehow influence the present psychic life. But this influence is in most cases to be evaluated in just the same way as the influence of some specific changes in a fixed star upon the physical processes in my study: it is not that an influence exists but that the influence is extremely small, approximately zero...The relations of psychical events to each other and the psychical processes depend not simply upon their strength indeed not even upon their real importance. The individual psychical experiences, the actions and emotions, purposes, wishes and hopes, are rather imbedded in quite definite psychical structures, spheres of the personality, and whole processes (pp.53-54).

Block & Block (1980) posited that the dynamic individual system of needs over the course of development becomes increasingly diffused and systemically integrated. That is, as an individual matures, the connections within certain psychical processes, events, and experiences provide a mechanism by which an individual expresses a tendency or pattern toward thinking, feeling, and behaving. Lewin (1935) depicts it as how “affective energies out of one system may go over into another” (p. 55). Block & Block (1980) described it as the conduit to the issue of boundaries and boundary systems that can delineate the differentiations of the influence that psychical events possess.

Lewin (1935) proposed a tendency towards equilibrium whereby dynamic firmness of boundaries and relative segregation of psychical systems exists. However, he included that movement in the direction towards equilibrium was typically for the individual system as a whole. Persons who consistently demonstrate equilibrium and

flexible segregation of psychical systems based upon contextual demands form the basis for Block and Block (1980) description of resilient types (see Figure 1 in Appendix A). Thus, ego-resilient types tend to be resourceful, adaptive, flexible, and well-adjusted to environmental contingencies (Block & Block, 1980; Lewin, 1935).

When there is consistent insufficient means or psychical energy to ward off environmental stimuli and displacement, fluidity, or a lack of internal firmness occurs within the individual system leakage into neighboring psychical systems takes place (Lewin, 1935; see Figure 2 in Appendix A). Block & Block (1980) found ego-undercontrollers to have insufficient ability to control impulses and delay gratification, possess an inability to inhibit overt expressions, emotionality and affect, and tended to be vulnerable to environmental distractions and contextual demands. The description creates the basis for Block & Block's (1980) ego control assertion and the accompanying description of the undercontrolled personality type.

Likewise, Lewin (1935) offers a description of the overcontrolled type, "...there are systems of very considerable functional firmness and isolation in the psychical...Only in the case of very strong tensions does the state of tension usually extend itself far over the neighboring regions" (pp. 60-61; see Figure 3 in Appendix A). Block & Block (1980) described Ego-Overcontrollers as readily able to contain impulses, delay gratification, inhibit their actions and affect, and

insulate themselves from distractions in the environment and within contextual demands.

Block (1971) proposed his seminal work on a theory of ego control and ego resiliency that is now the primary means for interpreting personality prototypes. In his book *Lives Through Time* (Block, 1971) sought to explore the continuity of personality types from adolescence through adulthood among 84 boys/men, measured at two separate time intervals of ages 13 and 35. The participants were derived from the Berkeley Guidance and Oakland Growth Studies at the Institute of Human Development (IHD) and were predominately White from the San Francisco Bay area. Block (1971) used a Q-sort technique with trained clinical inter-raters, described below by Ozer (1993).

The Q-sort procedure requires judges to sort a set of items into ordered categories, ranging from extremely characteristic or salient to extremely uncharacteristic or negatively salient. This judgment is made with reference to some specified target. The categories into which the items are sorted are given a numerical label that becomes the score of all items placed in that category. The number of items permitted in any category is fixed in advance, so the shape of the distribution of item scores is fixed and constant for all judges. Thus, Q-sorting is a form of rank ordering in which the number and location of ties is specified. Usually, the items consist of a set of verbal statements that are likely to vary in terms of how descriptive they are of the specified target (p. 149).

Originally, Block (1971) identified five personality types among the IHD sample, three primary types which included Ego-resilients, vulnerable overcontrollers, and unsettled undercontrollers along with two secondary types; Belated adjusters and Anomic extraverts. Ego resilients were thought to be well-adjusted and interpersonally stable. Vulnerable overcontrollers were thought to be inflexible and lacking in interpersonal effectiveness and unsettled undercontrollers were thought to be impulsive

and disruptive. The Belated adjusters and Anomic extraverts were seen by Block as possessing a distinctive personality change from adolescence to adulthood. Belated adjusters showed some signs of maladjustment during adolescence but by the time they were measured in adulthood were effectively functioning. The opposite was true for the Anomic extraverts.

Block and Block (1980) extended the understanding of personality prototypes with a formalized conceptualization of Ego control and Ego resiliency as a way to understand human organization of behavior. They proposed an enduring psychical structuring of the mind that refers to the “degree of impulse control and modulation” (p. 41). In addition, as proposed by Lewin (1935), they used as the bases for understanding the state of boundary acquisition as the degree of permeability and impermeability of psychical tensions. Tensions move towards equilibrium and flexibility as in the case of resilient type. In the case of the undercontrolled type, tensions become weak, diffused, and spills over into neighboring systems. The overcontrolled type becomes self-contained and rigid.

In addition, to formalizing the constructs of Ego control and Ego resiliency, Block & Block (1980) conducted a longitudinal study with the parents and children ages 3, 4, 5, 7, and at the time the study was concluding data for children age 11 was gathered from two California nursery schools over a three year period. The sample consisted of measuring 110 families including those aged 11. In this study, Block presented the emergence of four Ego control and Ego resilient types (Table 2.7, p. 89). The types were labeled as Resilient Undercontroller, Resilient Overcontroller, Brittle Undercontroller,

and Brittle Overcontroller. The table represented a convergence of data taken at both 3 years of age and confirmed at 4 years of age, where Block describes the existence of a two-dimensional psychological space with strong implications for understanding the individual child's pattern of interpersonal functioning. The descriptions were quite compelling.

Block & Block (1980) reported that the presence of Ego resiliency had the ability to mediate impulse expressions in the undercontroller child where the child is described as energetic, active, curious, exploring, able to recoup, interesting, and arresting. However, the child that lacked ego resiliency and labeled Brittle Undercontroller is seen as impulsive, easily disrupted, restless or fidgety, externalizing and vulnerable, as well as manipulative. In contrast, the presence of ego resiliency in the overcontroller child is viewed most positively and described as compliant, calm, relaxed, empathic, free of anxiety, and highly sociable. Further, the Brittle Overcontroller child was viewed as pathological in manner, affect, with the ability to mobilize resources. This child was further described as inhibited, anxious, intolerant of ambiguity, rigid, and interpersonally reserved.

At first glance, it would appear that there is some contradiction with earlier and contemporary labels for understanding the personality prototypes. However, the author believes that clarification can be found by revisiting Lewin's (1935) theory of understanding of the structure of the mind. For instance, Lewin described the psychical energies, forces, and tensions as dynamic process and not discrete entities. Therefore, it stands to reason that because psychical events in conjunction with contextual demands

and environmental stimuli are dynamic and interactive in nature so individuals likely do not operate or function purely in only one area within the psychical system; that is, varying degrees of movement likely takes place. For example, an individual may possess the primary personality operating position of the resilient prototype. However, based upon current or particular experiences, actions, emotions, purpose, wishes, hopes, and desires may temporarily choose to display fluctuating characteristics commonly associated with either the undercontrolled or overcontrolled prototype. For this individual operating in a rigid or impulsive manner may actually be the most adaptive method of responding to a given stimuli; however, the individual's personality remains characterlogically resilient prototype. In this example, taking on the temporary pattern of another prototype is actually an act of resiliency. Taken together, the personality structure of the prototypes may constitute a range or spectrum which researchers may uncover in their participants. That is, researchers may experience the individuals as having more or lesser degrees of Ego resiliency as a mediating factor or influence even though they may primarily and patternistically fit within the undercontroller or overcontroller prototype.

This discussion should remind researchers of the exciting possibilities for studies in this area. It is left to be seen as to whether or not each person in our society is able to be cast into a particular prototype. It stands to reason, that some persons may not fit firmly within a given prototype due to the nature of the dynamic processes of psychical events in which all undergo (Lewin, 1935). In fact, Asendorpf, et. al. (2001) found

prototypes that they labeled as “fuzzy and discrete-fuzzy types” (p. 170-171). However, it is clear that additional personality prototype research is needed and must take into account the varying complexities of individual, social, contextual, and environmental differences that make people interesting and human.

Although there is a developing research base using personality prototypes as a tool for better understanding the individual, there is limited research that includes as a focus a Black/African American sample. Robins, John, Caspi, Moffitt, and Stouthamer-Loeber (1996) are among the first to offer insight into the replicability of the personality prototypes within this population. In their longitudinal study, participants were derived from the Pittsburgh Youth Study. The study stratified a sample of 300 boys (e.g., 98 at high-risk for criminal behaviors and 202 non-at risk). The boys aged 12 and 13 during the data collection along with their caregivers were assessed using the Common Language Version of the California Child Q-Set (CCQ) (Robins, et.al., 1996). The caregivers were provided with a set of 100 item cards with descriptors for behavioral, affective, and cognitive characteristics. The cards were used to describe the child in question and are forced into nine categories ranging from extremely uncharacteristic (1) to extremely characteristic (9). The Q-sort method is a commonly used personality assessment tool (Ozer, 1993). Q-factor analysis was used to test the replicability. In two combined study analysis, the first study found convergence with personality prototypes types as described by Block & Block (1980) in both the African American and Caucasian subsamples and showed conceptually congruent relational patterns as distinguished by the Big Five personality dimensions. The second study explored the

interpretations of the types with implications in intellectual ability, school performance, juvenile delinquency, and prevalence rates of psychopathology. Overall, Robins, et. al. (1996) was able to demonstrate the potentially promising predictive abilities of the typologies across two subgroups. No other studies were found that used a large Black/African American sample.

The body of personality prototype research is steeped in child and adolescent studies. Several sought to show how the personality prototypes can predict enduring patterns of personality patterns over time from childhood to adulthood. For instance, Gjerde, Block, and Block (1988) attempted to replicate the Block & Block (1980) study by exploring longitudinally the egocentrism and ego resiliency structures of children and adolescents aged 3, 4, 7, 11, and 14. Asendorpf and van Aken (1999) conducted a longitudinal study on German preschoolers through age 12 to explore development outcomes. Van Leeuwen, De Fruyt and Mervielde (2004) conducted a longitudinal study to determine if the prototypes were replicable and predictive of problem behaviors in 491 children and adolescents. Hart, Burlock, London, Atkins, and Bonilla-Santiago (2005) explored classroom observations of 63 children to assess for biological, cognitive, and behavioral processes deemed to influence high academic achievement and aggression. Steca, Alessandri, Vecchio, and Caprara (2007) explored the power of the typological approach to discriminate adolescents in terms of their academic and social functioning and stress.

The utility for research of the personality prototypes has also been used to explore the relationship between Big Five personality measures. For instance, Schnabel,



Asendorpf, and Ostendorf (2002) attempted to replicate the personality prototypes across two Big Five personality measures (NEO-PI-R and NEO-FFI). Ekehammar and Akrami (2003) explored the relationship between the Big Five as measured by the NEO-PI and predicting prejudice. More recently, Steca, Alessandri and Caprara (2010) explored psychological well-being and quality of relationships among 735 elderly Italian adults using the personality prototypes and corresponding Big Five Model ratings.

Further, the prototypes have been used to explore adjustment following spinal cord injury (Berry, Elliott, & Rivera, 2007) cognitive abilities and motivational processes in science achievement and engagement (Lau & Roeser, 2007), aggression (Grumm, von Collani, 2009), and women's mid-life issues (York & John, 1992). The research of personality prototypes is far from being satiated as there is still much to learn about various replicability aspects according to race/ethnicity, cultural variables, ages, gender, and contextual variables. In particular, there is need for research concerning personality prototypes and their utility for understanding high academic achievement; particularly among Black/African Americans who are said to be lagging behind in academic achievement when compared to the White counterparts (Wyatt, 2009).

### **High Achieving and Gifted Black/African American Undergraduates**

“The struggle to improve the educational experiences of Black/African American youth continues, yet only a few researchers have attempted to examine successful students from this population” Hebert, 2002, p. 26). Of the relatively few studies conducted, the majority have been restricted to elementary, junior high, and high schools levels (Fries-Britt, 1997). The current media images and the disproportionate amount of

research focusing on deficits and remediation suggest that it is time for researchers interested in Black/African Americans successful collegiate navigation to conduct research using positivistic approaches (Bonner, 2001; Fries-Britt, 1997; Harper, 2008).

Bonner (2001) conducted a phenomenological study of two gifted African American male college students, one attending a traditionally white institution (TWI) and the other attending a Historically Black College or University (HBCU). In this study, Bonner sought to discover factors that contribute to success within the academic environment. More specifically, Bonner looked at the relationship between the respective institutions and the students perceptions of their institution to nurture their academic giftedness. The study found important aspects of each participant that were thought to bolster academic achievements including family and peer relationships influence. Interestingly, two aspects that also were thought to cultivate academic achievement according to Bonner (2001) were a strong self-perception and the institutions willingness to “promote concern for the whole student.” The whole student included nurturing features of students both inside and outside the classroom. The study defined self-perception as follows:

“...elucidating their views of self and the views they perceived others held of them. Additionally, the two institutional contexts provided unique backdrops for discussion. A high regard for self, tempered by an overarching sense of humility, was *the common personality thread that linked the two participants together*. Yet, it was primarily the institutional context that appeared to uncover differences in the manner in which their views were articulated” (pp. 16-17, italics added).

In the background of this study is an issue of personality. Bonner terms it the “common personality thread.” Quite possibly, the participants in Bonner’s study share a similar personality prototype.

Bonner (2005) interviewed 63 sixth grade students enrolled in middle school. He asked the question, “What are the three most important factors contributing to success?” Overwhelmingly, the respondents answered: 1) self-confidence, 2) intelligence, and 3) determination. Another aspect of the study found that respondents locus of control impacted their academic success. For instance, it was thought that “gifted students tend to possess positive levels of self-perception and tend to have internal locus of control” (Yong, 1994 as cited in Bonner, 2005). Rotter (1966) defined an internal locus of control as a belief that one’s own actions determine outcomes, whereas an external locus of control means that one’s own actions have very little to do with outcomes but rather outcomes are due to outside forces such as luck. Lewin (1937) would attribute characteristics such as self-perception, confidence, determination, internal and external locus of control to psychical events adjusted according to environment and modulated by personality.

In a qualitative study, Hebert (2002) explored five high achieving African American male college students. In his study he found several themes present across students. These themes included 1) a strong belief in self, 2) nurturing influence from significant others; particularly their mothers, 3) continued recognition and reinforcement from significant others throughout their school experiences, 4) significant teachers who reinforced messages received from significant others, 5) continued support from

professional mentors, 6) recognition of multiple talents that were nurtured through developmental opportunities, 7) early exposure to a racially integrated peer group, and 8) an self-determined ability to withstand racism and remain goal-oriented. Hebert points out that a strong sense of self coupled with an internal motivation to succeed inoculated the participants against overt acts of racism.

“The five gifted Black males in the study had a strong belief in self and appeared to be competitive survivors. They knew where they were going in life, and embedded within their belief in self was an internal fortitude that helped provide the strong motivation for achievement.” (p. 36)

In this study by Hebert (2002) the strong belief in self and internal fortitude could be construed as equilibrium as described by Lewin (1937). Equilibrium would then be equated to the resilient personality type. Thus, the present study will be critical in adding to the literature base on personality typology as well as increasing our understanding of how personality may play a role in Black/African American undergraduate high academic achievement.

Personality types among Black/African American college students have been empirically understudied. In fact, no personality prototype research was located on this population as it pertains to undergraduate high achievement. However, popular media and public opinion are riddled with anecdotal assumptions and comments in general about personality traits within the black community and how these assumptions relate to achievement or the lack thereof (Fries-Britt, 1997).

### **Workplace Personality Relevance**

The issue of work personality as a subcomponent relating to the larger notion of how individuals function in the work environment is also missing from the current literature. This issue is paramount to college undergraduates who will at some point enter the work force following matriculation. Workplace personality is a relatively new concept (Orozco, 2011) and has yet to gain much empirical support. However, issues such as counterproductive work behaviors (Bowling & Eschleman, 2010; Bruk-Lee & Spector, 2006; Fox, Spector, Goh, & Bruursema, 2007; Fox, Spector, & Miles, 2001; Mount, Ilies, & Johnson, 2006); aggression (Baron, Neuman, & Geddes, 1999), deviance (Bennett & Robinson, 2000; Berry, Ones, & Sackett, 2007) and harassment (Bowling & Beehr, 2006) are widely researched. Making connections as to how one thinks, feels, behaves, and interacts with the world including in the work environment could add to our understanding of workplace personality. These issues and others could be viewed as a function of personality and mapped onto the personality prototypes. Hence, when we combine the two understudied issues of workplace personality and undergraduate achievement it may be possible to better understand the role that high academic achievement plays as a precursor to employability and fiscal achievement. Thus, the current study may have far reaching implications and practical utility for various stakeholders.

### **Personality Prototypes and Educational Theory**

The theory and tenets of the Three-Ring Conception of Giftedness is presented for one primary reason. It is necessary to contextually understand the realm of

educational pursuits as it applies to the necessary components of high academic achievement. However, absent from the educational literature is how to practically conceptualize in what manner the Three-Ring Conception of Giftedness might manifest within a given personality structure.

Joseph Renzulli first put forth the theory of the three-ring conception of giftedness over 30 years ago and like many other theories it has evolved over time based upon his own and other research and practical applications. The theory name is derived from the three clusters of traits that are interlocked, interactive, and dynamic in nature (Renzulli, 2006). The three traits are referred to as above-average ability, task commitment, and creativity. Each of the traits are thought to work in concert with one another, overlapping, engaging, changing, and interacting with the environment and contextual demands towards creative productions (Renzulli, 1988).

“...gifted behaviors are manifestations of human performance that can be developed in certain people, at certain times, and under certain circumstances” (Renzulli, 1988, p. 20).

Gubbins (1982) determined that task commitment and creativity were paramount for high levels of productivity and that above average achievement was insufficient on its own. Thus, it is important to take a closer look at the three traits in order to glean from them their usefulness in assisting to interpret high academic achievement.

Above average ability takes into account what is commonly associated with *general intellect* (Renzulli, 2006). General intellect is often the focus of the vast array of intelligence and aptitude tests which most often consider abilities in

verbal and mathematical reasoning and acquisition, spatial relations, and memory abilities (Renzulli, 2006). Howard Gardner (1999) puts forth the notion of multiple intelligences which expands the conception of intelligence to include additional aspects of human performance such as logical-mathematical intelligence, linguistic intelligence, musical intelligence, bodily-kinesthetic intelligence, spatial intelligence, interpersonal intelligence, and intrapersonal intelligence. Gardner (1999) defines intelligence as “a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture” (pp. 33-34).

The second feature in the three-ring conception of giftedness is task commitment. Task commitment is essentially a non-intellectual trait that is vital in the process of becoming creative/productive (Renzulli, 2006). Renzulli (2006) describes task commitment as a “focused or refined form of motivation.” Task commitment brings the psychical energy force necessary to persevere even through adversity, to remain steadfast in the face of obstacles, and possess focused interest (Renzulli, 2006). Simply put, task commitment is a primary ingredient in high academic achievement.

The final cluster trait is creativity. Creativity is said to be a combination of both intellectual and non-intellectual features that intertwine to produce “curiosity, originality, ingenuity, and a willingness to challenge convention and tradition” (Renzulli, 2006, p. 228). Creativity gets recognition and notoriety; for instance, the artwork of Vincent Van Gogh, scientist such as Albert Einstein, psychologists like Sigmund Freud, or even a religious and political icon like Rev. Dr. Martin Luther King, Jr. These persons were highly creative and it was their creative productions that made each of them

household names for different reasons. Many others in their fields were likely as intelligent but it was their task commitment and creative visualization or production that set them apart and elevated them into the realm of high achieving (Renzulli, 2006). Figures 4, 5, and 6 (see Appendix A) are illustrated to further explain the application of the three-ring conception of giftedness as it applies to the three personality prototypes.

Research by Zimmerman & Schunk, (2008) suggests that academic performance between low and high achieving students is linked to levels of self-regulation. Zimmerman, (1989) defines self-regulation as “the degree to which students are metacognitively, motivationally, and behaviorally active participants of their own learning process” (p. 329). Theoretically, self regulation and similar constructs such as self-efficacy, locus of control, and self-perception in the eyes of theorists Lewin (1937) is considered to be imbedded in an individual’s personality structure. The current study positions itself in line with this understanding and expands upon the conceptual considerations as well as the functionality of this perspective among an understudied population.

### **Integrative Summary and Hypotheses**

Based upon the theoretical underpinnings explored within this study, several hypotheses were developed. Figures 4, 5, and 6 (see Appendix A) include illustrations of the hypotheses associated with both personality prototypes and their application as expressed though the Three-ring Conception of Giftedness.



Hypothesis 1: There are differences between personality prototypes and the WPI raw scores.

It is expected that the personality prototypes will have differing WPI raw scores. Since the WPI work styles are written in a positive manner and reflect the presence of a given characteristic such as, dependability, stress tolerance, adaptability, and attention to detail it is specifically hypothesized that scores will have a distinct pattern that includes from highest to lowest the Resilient prototype, followed by the Overcontrolled prototype and then the Undercontrolled prototype. This pattern is assumed because it follows most closely the theoretical descriptions from Block & Block (1980) and Lewin (1937) as well as fits into the conception of giftedness provided by Renzulli (2006).

Block & Block (1980) reported the presence of ego resiliency has the ability to mediate impulse expressions thereby individuals display increased energetic, active, curious, exploring, recuperative, interesting, and arresting attributes. In addition, Block & Block (1980) and Lewin (1937) reported resilient types to be resourceful, adaptive, flexible, and well adjusted to environmental contingencies. When considering the educational environment, Renzulli (2006) reported that individuals who achieve balance between above average ability, creativity, and task commitment are more likely to manifest human performance thought to be associated with giftedness (see Figure 4 in Appendix A). Taken together, it is hypothesized that individuals within the Resilient Personality Prototype cluster will equate to the highest raw scores found on the WPI as a result of having the most highly prized characteristics within the workplace.

Hypothesis 2: There are no differences between the personality prototypes and gender.

When exploring the personality prototypes, the author found no empirical and/or theoretical assumptions made by Block or Lewin about gender differences within the personality prototypes. Thus, the current study makes no assumptions about the role that gender plays among the personality prototypes. Rather, the current study takes an exploratory position in an attempt to determine if gender differences are present between the personality prototypes.

Hypothesis 3: There are differences between the personality prototypes and CGPA's.

Block and Lewin make no assertions concerning an individual's propensity to achieve nor do they specifically reference individual performance according to the personality prototypes. However, based upon the personality prototype characterological descriptions and the Renzulli (2006) model of the Three-ring Conception of Giftedness, the current study hypothesizes that individuals within the Resilient Personality Prototype cluster will possess the highest CGPA's within the sample as a result of their resourcefulness and adaptive abilities as well as their ability to achieve optimal levels of balance between above average ability, creativity, and task commitment. Figure 4 (see Appendix A) illustrates the hypothetical manifestations of a resilient personality prototype and the equilibrium achieved through the Three-ring Conception of Giftedness lens.

In addition, Block & Block (1980) found that the Overcontrolled personality prototype was viewed most positively when high levels of ego resiliency were present.

Individuals with the above makeup were described as compliant, calm, relaxed, empathetic, free of anxiety, and highly sociable. However, generally speaking, Overcontrollers were viewed as able to contain impulses, delay gratification, inhibit their actions and affect, as well as insulate themselves from distractions in the environment and contextually, rigid, and inflexible (Block & Block, 1980; Lewin, 1937). Thus, it is hypothesized that Overcontrollers within the sample will possess lower CGPA's than those in the resilient cluster but higher CGPA's than those in the undercontrolled cluster. Moreover, it is hypothesized based upon the Renzulli model that individuals in the overcontrolled cluster possess higher levels of task commitment as illustrated in Figure 6 (see Appendix A).

Block & Block (1980) described the characterological pattern of the undercontrolled personality prototype as having insufficient ability to control impulses and delay gratification, unable to inhibit overt expressions, emotionality, and affect, with a tendency to be vulnerable to environmental distractions and contextual demands. With this in mind, the current study hypothesized that individuals within the undercontrolled cluster would possess the lowest CGPA's among all the clusters. Further, individuals in the undercontrolled cluster are unlikely to tap into full potential of the conceptual model as explained by Renzulli (2006) as illustrated in Figure 5 (see Appendix A).

## **METHODOLOGY**

### **Participants**

Participants were derived from a secondary data set provided by Pearson, Inc. A data request was submitted for a sample consisting of Black/African American undergraduates with recorded WPI scale scores. Also included in the data set was the Cumulative Grade Point Averages (CGPA) for all students over their academic tenure with gender designations. The final approved participant data set included (N = 951) recent college graduates from the Mid-Atlantic region in the United States. CGPA's ranged from 2.1 to 4.0 on a four-point scale. The total sample consisted of approximately 26% men (n = 249) and 74% women (n = 702) respectively.

### **Measures**

The Workplace Personality Inventory (WPI) is a relatively new instrument, introduced in 2007 by Pearson, Inc. to meet identified customer needs. The WPI is reported by Pearson (2007) to be specifically designed to be relevant to work issues such as compliance with the American with Disabilities Act of 1990, easy to map onto job requirements and competencies for a wide variety of occupations, and to have face validity with users. The measure is based upon the Work Styles personality taxonomy (Borman, Kubisiak, & Schneider, 1999) and is endorsed by the U.S. Department of Labor as evidenced by its inclusion in the Occupational Information Network (O\*NET) online database.

A variety of personality models were used to develop the WPI including the Five Factor Model, the Hogan Personality Inventory, the Occupational Personality

Questionnaire, and the Assessment of Background and Life Experiences (Orozco, 2011). Borman et. al., (1999) derived the most suitable work styles based upon their correlation with noted job behaviors or work related criteria. In addition, literature reviews and meta-analyses were conducted (Chartrand, Yang, & Filgo, 2009).

The measure contains 175 items using a four point Likert-type scale which assess sixteen work-related personality traits within seven broad domains shown to be correlated with job behaviors. The domains include Achievement Orientation, Interpersonal Orientation, Adjustment, Conscientiousness, Practical Intelligence, Social Influence, and Independence. Nestled within each broad domain are the relevant work style scales. Achievement Orientation includes a measure of achievement/effort, persistence, and initiative. Interpersonal Orientation includes cooperation, concern for others, and social orientation. Adjustment consists of self-control, stress tolerance, and adaptability/flexibility. Conscientiousness includes dependability, attention to detail, and integrity/dutifulness. Practical intelligence contains a measure of innovation and analytical thinking. Social influence and Independence are singular scales which measure leadership orientation and independence, respectively. In addition to the seven broad domains, the Unlikely Virtues scale which is designed to deter and detect individuals from purposefully attempting to present a favorable image.

The reliability and validity for the WPI are as follows: internal consistency estimates for each scale range from .60 to .81, with a median of .76 (Pearson, 2007). See Appendix B to view how each scale correlates with types of behaviors and the higher level factors. Correlations with the Occupational Personality Questionnaire (OPQ) and

the Hogan Personality Inventory (HPI) were .5 or better for convergent validity scales. Criterion related validity studies yielded scores of .21 or higher for various occupations related to on-the job performance.

### **Procedures**

The first research question, for this study was based upon the theoretical underpinnings gathered from Lewin, (1935); Block (1971) and Block & Block, (1980). The proposed question was as follows: Are the three personality prototypes as described by Lewin (1935) and Block & Block (1980) present among the Black/African American undergraduates sample using the measure concerning workplace personality? In order to answer this question, it was important that two issues be addressed. The first issue was determined by objectively analyzing the data using *k-means* as the classification method of cluster analysis. The *k-means* method is a type of cluster analysis that uses average-linkage which is concerned with optimizing the Error Sum of Squares (ESS).

Average-linkage computes the arithmetic average of the similarities between all entities in one cluster with all entities in the second cluster and subsequently joins the clusters if a given level of similarity is achieved using this average value. Implicitly this method defines a cluster as a group of entities in which each member has a greater mean similarity with all members of the same cluster than it does with all members of any other cluster. The parameters for this method are:

$$\alpha_i = \frac{n}{n_i+n_j} ; \alpha_j = \frac{n_j}{n_i+n_j} ; \beta = \gamma = 0$$

where  $n_i$  is defined as the number of entities in cluster i (Blashfield, R. K. & Aldenderfer, M. S. (1988, p. 452).

In addition, *k-means* uses iterative partitioning which according to Anderberg (1973) as cited in Blashfield, et..al (1988) works in the following manner:

1. Begins with an initial partition of the data set into some specified number of clusters; computes the centroids of these clusters.
2. Then, allocates each data set point to the cluster that has the nearest centroid.
3. Computes the new centroids of the clusters, clusters are not updated until there has been a complete pass through the data.
4. Steps 2 and 3 are alternated until no data points change clusters.

Next, a Prototypic Cluster Profile was developed. The *k-means* clustering analysis provided final cluster centers (see Table 1 in Appendix B). The values along with the descriptive components of the WPI work style and relevant behaviors (see Table 2 in Appendix B) were used as the foundation for understanding the relationship between the three clusters (i.e., resilient, overcontrolled, and undercontrolled) personality prototypes; (Chartrand, et. al., 2009). For example, the WPI relevant behaviors were written in a positive manner; meaning, high scores indicate the presence of a particular characteristic while low scores indicate a relative absence of that characteristic. Based upon the characterological descriptions and patterns provided by Block and Lewin, it was determined that the cluster type that espoused high scores in all categories among the work styles and relevant behaviors must be able to achieve greater degrees of balance. Thus, the high scoring category reflected that of the Resilient Personality Prototype. Likewise, characterological descriptions and patterns for the Overcontrolled and Undercontrolled personality prototypes were reviewed and it was

determined that the Overcontrolled cluster would most likely reflect scores in the mid-range while the lowest scores among all the categories most closely fit the Undercontrolled personality prototype.

After the development of the Prototypic Cluster profiles, the second and third research questions could be addressed. Does the distribution of personality prototypes differ by gender? Does high academic achievement of Black/African American undergraduates as defined by CGPA differ as a function of personality prototype?

Descriptive statistics and an ANOVA were conducted to answer these questions and Tables 3, 4, and 5 displays the results. For example, Table 3 (see Appendix B) displays the Frequencies by Cluster type. As a part of the scholarly record, the Main and Interaction Effects between Cluster, Gender, and CGPA are reported in Table 4 (see Appendix B). In addition, the Means and Standard Deviations by Cluster, Gender, and CGPA are reported in Table 5 (see Appendix B).



## RESULTS

### Prototypic Cluster Profiles

The first consideration of the current study was to determine if the three personality prototypes as described by Lewin (1935) and Block & Block (1980) could be derived among a large Black/African American undergraduate sample utilizing a measure concerning workplace personality? A *k-means* cluster analysis procedure was performed and three clusters were produced. Further, the k-means analysis yielded a convergence of the data after 30 iterative passes where no or small change in cluster centers were detected. The absolute coordinate change for any of the centers was .000 with the minimum distance between initial centers 45.06. (see Table 1 in Appendix B). To increase confidence in the clustering solution a Two Step clustering method was preformed and yielded the same interpretative results (see Table 6 in Appendix B).

In order to interpret the clusters, the foundational conceptual work of Lewin and Block were reviewed. The WPI work styles and relevant behaviors (see Table 2 in Appendix B) were used as a comparative guide which to interpret the meaning of the high, medium, and low cluster scores. Distinctions were drawn between the groups, for instance, the resilient prototype is linked to personality characteristics that are most positively viewed by others. From a conceptual point of view, it is logical to assume that resilient characteristics would also be highly prized in the workplace. Gjerde, Block, and Block (1988) provided a listing of descriptors most positively linked to Ego-Resiliency. The descriptors that would be desirable in the workplace included:

...vital, energetic, and lively; resourceful in initiating activities; curious and exploring, self-reliant and confident, perceptually creative, recovers

after stressful experiences, responds to humor, attentive and able to concentrate, competent, and uses and responds to reason (p. 426).

While the descriptors are not specific to the workplace, it was important to derive a general understanding of each of the prototypes as previously discussed.

Block & Block (1980) described the Ego-Overcontrollers as readily able to contain impulses, delay gratification, inhibit their actions and affect, and insulate themselves from distractions in the environment and contextual demands. An individual whose personality structure is primarily overcontrolled may have a tendency to operate in a static, fixed, or rigid manner regardless of the contextual demands and environmental stimuli (Lewin, 1935). An individual with an overcontroller prototype may likely have some characteristics that are prized in the workplace; however, it may depend upon the type of work being undertaken. Conversely, Ego-Undercontrollers were reported by Block & Block (1980) to have insufficient ability to control impulses and delay gratification, possess an inability to inhibit overt expressions, emotionality and affect, and tended to be vulnerable to environmental distractions and contextual demands. Thus, it is likely that the characteristics of the undercontroller prototype would be least likely to be prized in the typical workplace but again, may depend upon the work environment and demands.

Derived conceptually, the work styles and the relevant behaviors of the WPI were written in the positive and most closely fit characteristics typically related to the resilient prototype and positive views within the workplace. Therefore, high scores on all the WPI scales were considered a best fit for the resilient prototype and labeled as Cluster 1 – Resilient. Moreover, the aggregation of low scores on all the WPI scales

were found most negatively associated with typical workplace behaviors and found to be a best fit for the undercontrolled prototype and labeled as Cluster 2 – Undercontrolled. Cluster 3 – Overcontrolled was housed between the other two clusters given that WPI scores were lower than those associated with Cluster 1 – Resilient but also higher than those related to Cluster 2 – Undercontrolled.

The descriptive analyses of the clusters were reviewed. Frequencies for each of the clusters yielded the highest distribution in Cluster 3 – Overcontrolled prototype with ( $n = 378$ ) individuals or 40% of the total cases. Whereas, Cluster 1 – Resilient prototype yielded the smallest percentage of individuals ( $n = 202$ ) or 21% of the total cases. Cluster 2 – Undercontrolled yielded slightly less than the overcontrolled group with ( $n = 371$ ) and 39% of the total cases. (see Table 3 in Appendix B for a table of frequency distributions by cluster).

The next two questions concerned whether gender and CGPA impacted cluster membership.

- 2) Does the distribution of personality prototypes differ by gender?
- 3) Does high academic achievement as defined by cumulative academic grade point average (i.e., 3.0 or above) differ as a function of personality prototype and/or gender?

To answer these questions, an ANOVA was conducted to test the main and interaction effects of gender and cluster. Gender was found to be statistically significant at the ( $p = .02$ ) level. Also statistically significant was the cluster membership at ( $p = .05$ ). Due to the size of the sample, there was substantial predictive power at .763 and

.616 respectively to ascertain even small variances. However, there was no detected interaction effect between the CGPA, gender, and cluster membership. (see Table 4 in Appendix B).

The question, does high academic performance of Black/African American undergraduates as defined by academic grade point differ as a function of personality subtype was answered using the descriptive statistics found in Table 5 in Appendix B. The Overcontrolled prototype (Cluster 3) held the highest CGPA among women, while the Resilient prototype (Cluster 1) yielded the highest CGPA among men. Overall, the Overcontrolled group captured the highest CGPA's while the Undercontrolled prototype (Cluster 2) produced the lowest CGPA's among both women and men. Statistically the results were significant (see Table 4 in Appendix B). Due to the theoretical nature of the current study it was important to ascertain the nature of small differences between the clusters. Thus, post hoc tests were run in order to take a closer look at the gender and CGPA differences. Figure 7 shows the percentage breakdown of the clusters by gender. Figure 8 displays the clusters by gender and CGPA above and below 3.0 (on a 4.0 scale).

## DISCUSSION AND CONCLUSIONS

### Goals

The first goal was to attempt to determine if the three personality prototypes described by Block & Block (1980) and Lewin (1935) could be replicated in a sample of Black/African American undergraduates using WPI scale scores. To answer this question, *k-means* analysis was used in an effort to ascertain the presence of the personality prototypes. The analysis yielded three clusters that fell into the high, medium, and low range. A prototypic profile was developed by exploring the definitions for each of the three prototypes as well as the WPI relevant work behaviors. It was determined that due to the practical and positive attributes associated with workplace relevant behaviors that cluster scores where all the scale scores were within the high range were considered as resilient prototype behaviors. The cluster scores where all the scales were low and considered least attractive workplace behaviors were deemed undercontrolled. Positioned between the two other clusters was the overcontrolled prototype which fell into the mid-range of scores.

The second goal of the study was to determine if personality prototypes differed as a function of gender. An ANOVA established statistical significance for gender. With regard to this issue, the sample ( $n = 951$ ) consisted of approximately 74% women and 26% men and with the large sample size held enough power to predict even small variations in the data. Interestingly, the resilient cluster for both men and women produced the smallest groups among the clusters (e.g., 5% and 16%) respectively. It is generally thought that approximately 75% of the general population falls within the

resilient personality cluster with the other two clusters at approximately 25% each respectively. Even more interesting is that the undercontrolled prototype cluster espoused the highest number of women. Traditionally, or maybe better phrased as stereotypically, Black/African American males are thought to be disproportionately connected to the undercontrolled cluster prototype with the negative characteristics of the ascribed. Another finding revealed that among the women who made up approximately 74% of the total sample, 59% were found among the undercontrolled and overcontrolled prototypes. However, among the men out of the 26% of the sample that were men, 21% were made up of the undercontrolled and overcontrolled prototypes with the larger proportion settling in the overcontrolled cluster.

The third goal of the study was to ascertain if the personality prototypes differed based upon CGPA. An attractive finding revealed that across all three clusters it was the trend for both men and women to have greater numbers in the above 3.0 CGPA category. As expected, the undercontrolled group in both men and women had the lowest CGPA of the three clusters. Post hoc tests were performed and all found statistical significance for the undercontrolled and overcontrolled prototypes; (see Table 7 in Appendix B). Tukey HSD yielded ( $p = .040$ ).

The current study reveals that it is possible to effectively ascertain the three personality prototypes among a sample of Black/African American undergraduates using the WPI scale scores. The WPI relevant behaviors clearly assisted in delineating the prototypes into the three clusters. In addition, gender and CGPA were found to play a role in the distribution of the personality prototypes. However, the degree to which

gender and CGPA impacts personality among the prototypes is beyond the scope of the current study.

### **Implications of Study**

The implications of the current study may have far reaching effects. Based upon the findings of the current study it is possible to further glean understanding of the results by placing them in the context of educational theory.

To begin, the resilient prototype includes each of the three traits intertwined as discussed by Renzulli (2006). When each combines in optimal fashion they are as Lewin (1935) termed it, in equilibrium, whereby above-average ability meets equal amounts of task commitment and creativity in dynamic and integrative manners to make the most of their human production. The explanation fits with what is generally associated with the resilient prototype given that equilibrium of the individual finds him/her optimizing potential.

The Undercontrolled prototype would be construed as placing less attention on any one given trait or the combination of the three traits and individuals may likely not be maximized in the utilization of the traits in dynamic fashion but rather vary to greater degrees in their choice of trait use. The explanation follows the pattern seen among researchers of personality prototypes given that undercontrollers psychical energy spills over into neighboring regions and becomes dispersed given rise of uninhibited behaviors. This may account for the lower CGPA's associated with the undercontrolled prototype.

The Overcontrolled prototype seemingly takes on juxtaposition to that of the Undercontrolled prototype. That is, rather than under-utilization of the conjunctive traits the Overcontrolled prototype will likely be centered upon task commitment. Greater emphasis may be placed upon the ability to persevere, be determined, and enact willpower and positive energy and interest towards the tasks at hand. This perseverance towards task commitment such as graduating from a top-tier university would take precedence over less important task such as pleasurable activities or other endeavors. The explanation follows that of the Overcontrolled prototype given that this type has a tendency to be able to set the external environmental and contextual demands aside even if in a rigid manner. Thus, Figures 4, 5, and 6 (see Appendix A) are illustrated to further explain the application of the three-ring conception of giftedness as it applies to the three personality prototypes.

### **Limitations of Study**

There are limitations in the current study which are worth mentioning. First, the current study used a secondary data set. The data was derived from information connected to the WPI; a self-report measure. Hence there is no way to know the manner or conditions under which the data was collected. Further, the current sample was highly educated; 100% of the participants were recent graduates from 4-year degree granting top-tier institutions in the Mid-Atlantic region. Therefore, when comparing the sample to the general population several issues spring forward such as approximately 24% of the general population has 4 year degrees (U.S. Census, 2010). Participants were connected



to only institutions in the Mid-Atlantic, which represents a geographic limitation. It is possible that the obtained results may have been different if undergraduates from other regions of the United States had been considered.

Given that personality structure includes taking into account various environmental and contextual demands and the current study used a measure of workplace personality, it is possible that other measures that are not restricted to the reference of the workplace may have yielded alternative results.

### **Areas of Future Research**

Due to the scarcity of literature concerning high achieving Black/African Americans, future research may consider replicating this study within other geographical locations. For instance, in the current study participants all graduated from Mid-Atlantic region institutions; however it would be interesting to see if results hold based upon other regions of the country. That is, do personality prototypes differ by geographic location? If we consider that personality is known to interact with the environment then geographic location may produce variability in the personality prototypes.

Likewise, researchers could also explore utilizing other measures and/or means of conceptualizing personality prototypes among high-achieving college students in general and specifically Black/African American undergraduates. Doing so may provide even greater depth and understanding of the function of personality in the academic setting. Exploring whether or not certain personality prototypes tend to gravitate towards particular majors of study would also shed light on the functionality of the personality prototypes. While exploring how and to what degree CGPA impact personality

prototypes would also extend our knowledge base. When considering the current sample of Black/African American undergraduates it was the trend across all three clusters to obtain CGPA's of 3.0 or greater (on a 4.0 scale). Thus, research that looks further at this high achieving trend may assist researchers in attempting to move away from deficit based studies.

Next, research that utilizes samples outside the college arena would not only be interesting but also may have far reaching implications. For example, research that looks at high achieving Black/African Americans in the workplace who have obtained high status positions (i.e., politics, finance, business, entrepreneurial, education, etc.). Are these professionals more likely to share a particular personality prototype? If so, which?

Moreover, it would be interesting to see if differences occur when taking into consideration ethnic identity by including such measures as the Multigroup Ethnic Identity Measure (Phinney, 1992). Questions such as how does one's attitude about ethnic identity interplay with personality prototypes? Would differences be seen between those who possess a highly developed sense of ethnic identity and those who do not? Are those with a highly developed sense of ethnic identity more likely to be represented by an overcontrolled, undercontrolled, or resilient personality prototype?

The sole focus of the current study was not on gender; however, gender was considered. Additional research as to the function of gender and personality prototypes would also increase our understanding. The current study centered on Black/African Americans; however, it would be interesting to explore gender across multiple races and/or ethnicities to determine if differences occur.

Additionally, it would also be notable to take a look at differences various experiences of distress. What role if any does stress play in the personality prototypes? How does experience with trauma, such as physical or sexual assault, PTSD, or other distress impact personality prototypes? Would persons with a resilient personality prototype have the propensity towards greater recovery? Would persons with an overcontrolled personality prototype develop particular compensation strategies or be more likely to develop internalized maladaptive functioning? Would persons with an undercontrolled personality prototype have greater instances of externalized maladaptive functioning?

Another issue that would be interesting to explore is the personality prototypes among mental health disorders. Questions, such as, are certain personality prototypes more likely to have equal or greater distribution among mood or anxiety disorders? Are persons with resilient personality prototype less likely to be diagnosed with a mental health disorder? How and to what degree does personality prototype play a role in mental health diagnoses? Can severe mental health disorder be predicted by personality prototype?

Researchers may also consider exploring personality prototypes among various performance measures or academic tasks. It would be interesting to determine if certain personality prototypes have a proclivity to do better on verbal verses performance measures. For instance, is it possible to predict scores on performance tasks based upon personality prototype? The answer to this and other questions like it could have far reaching implications academically as well as in the workplace.

In summary, the current study met its initial goals of determining the replicability of the personality prototypes utilizing a workplace personality measure within a large understudied Black/African American sample. This study will add to the literature base which explores the utility of the personality taxonomy approach. In addition, the current study was able to determine that personality is impacted by gender. As discussed, additional research in this area is greatly needed.

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**APPENDIX A**



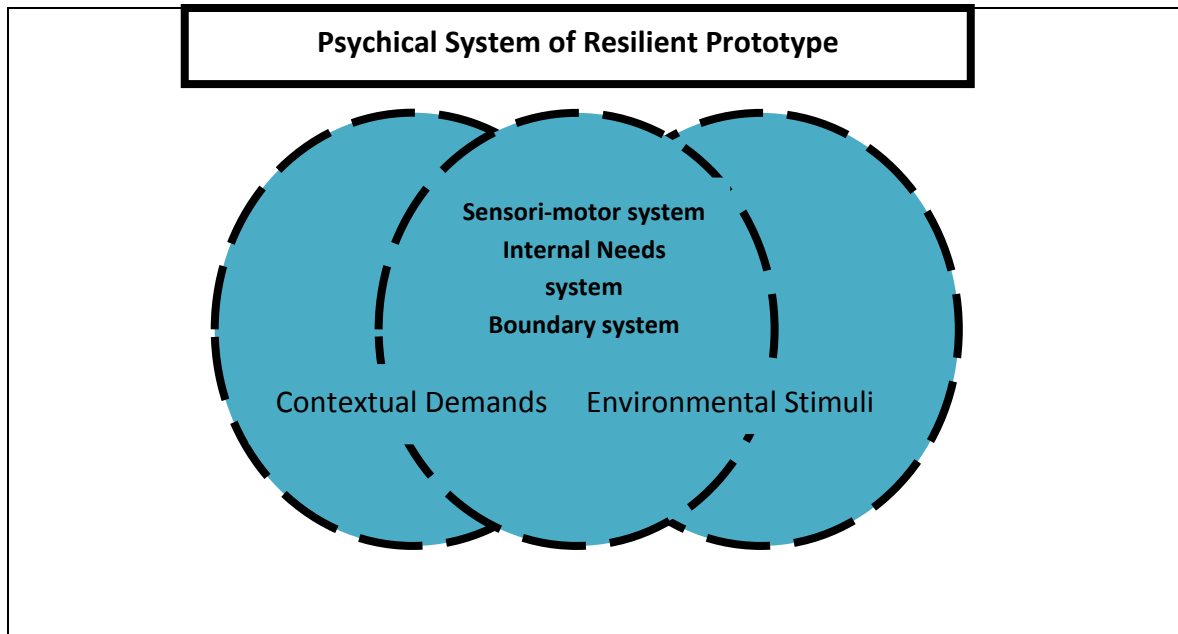


Figure 1. Illustration of the Resilient Prototype

Figure 1 illustrates the system of an individual that is in equilibrium. The nature of an individual's personality structure in equilibrium is primarily resilient. The resilient personality structure holds the ability to determine the most adaptable and flexible method of operation resulting in continued striving towards equilibrium with neighboring regions within the psychical systems, contextual demands, and environmental stimuli (Lewin, 1935).

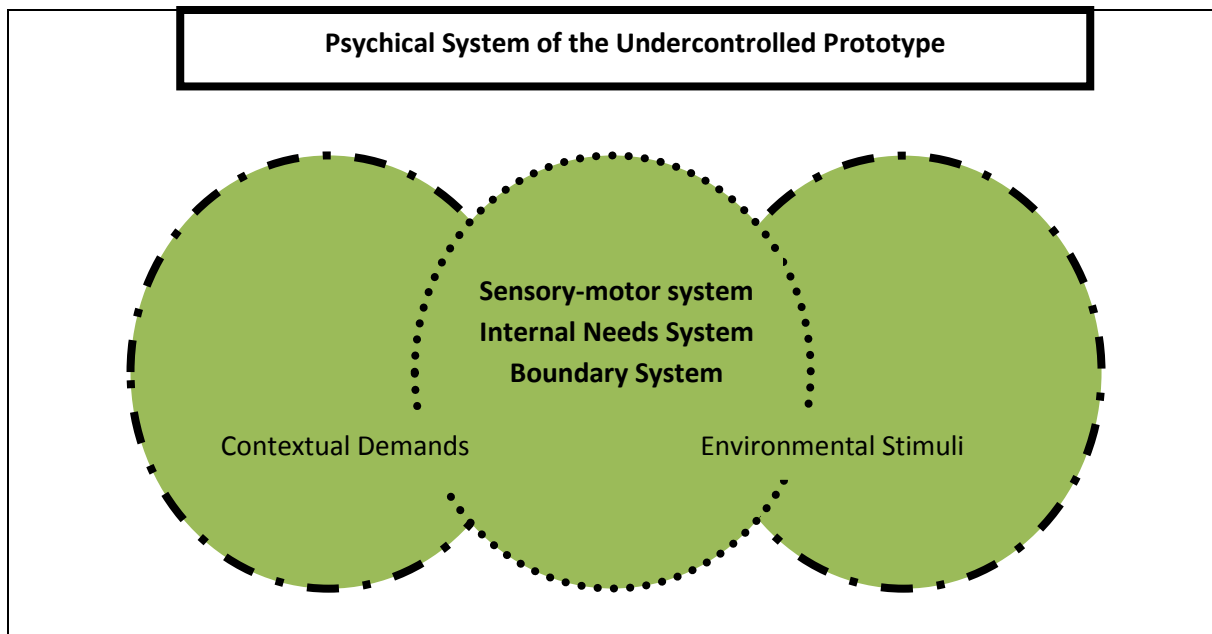


Figure 2. Illustration of Undercontrolled Prototype.

Figure 2 is an illustration which reflects the level of displacement, fluidity, and lack of internal firmness within the regions of the psychical system. An individual whose personality structure is primarily undercontrolled has a tendency towards leakage into neighboring regions within the psychical system based upon contextual demands and environmental stimuli (Lewin, 1935).

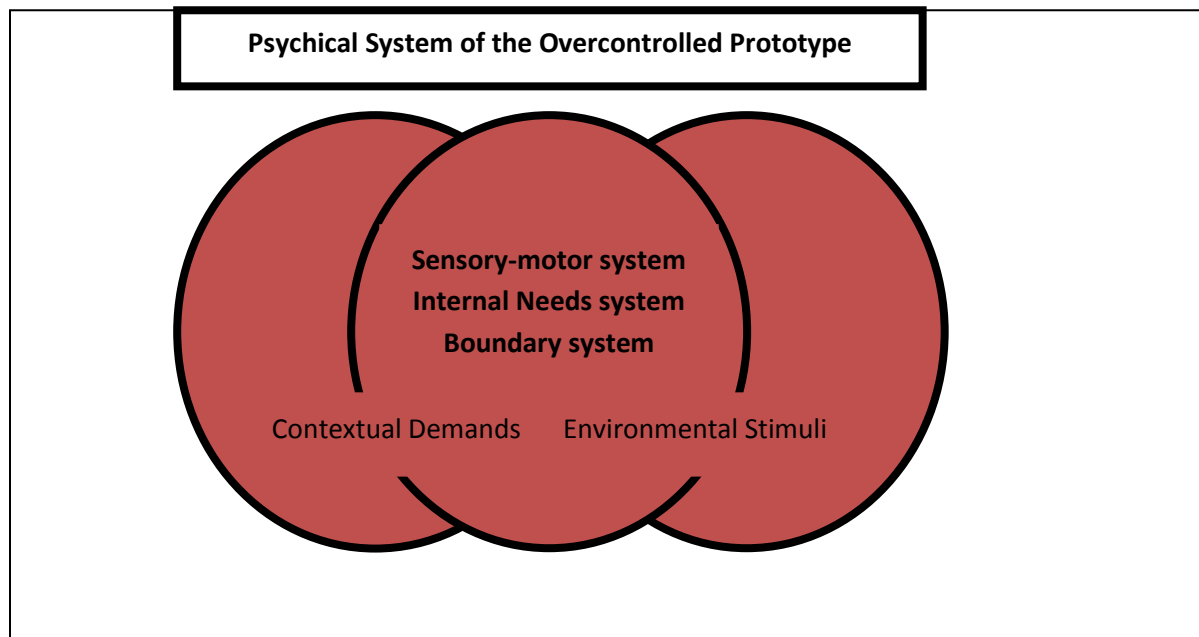


Figure 3. Illustration of Overcontrolled Prototype

Figure 3 houses an illustration of the overcontrolled prototype. The illustration reflects the degree of firmness, isolation of psychical events, and the rudimentary nature of an individual with an overcontrolled personality structure. An individual whose personality structure is primarily overcontrolled there is the tendency to operate in a static, fixed, or rigid manner regardless of the contextual demands and environmental stimuli (Lewin, 1935).

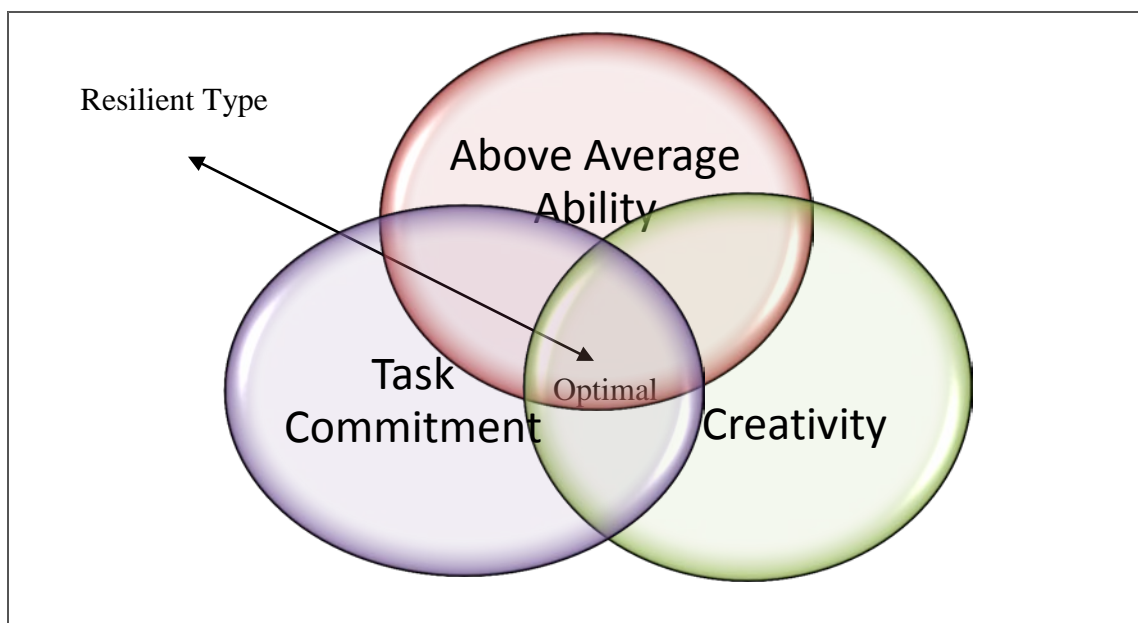


Figure 4. Applied Three-Ring Conception of Giftedness among Resilient Personality Prototype

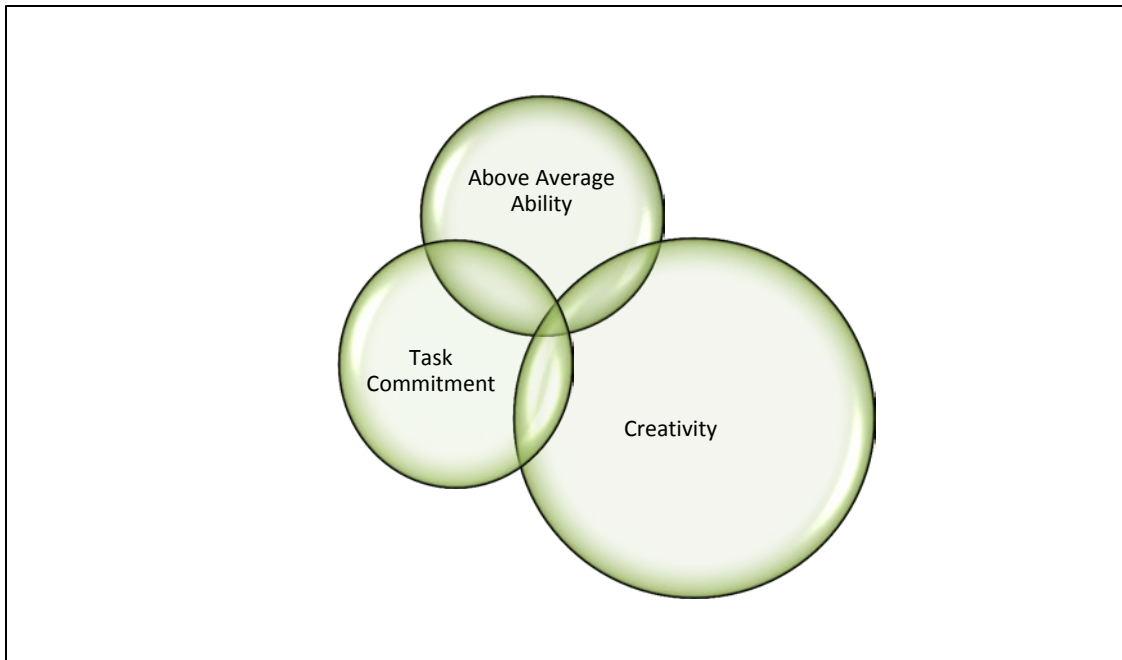


Figure 5. Applied Three-Ring Conception of Giftedness among Undercontrolled Personality Prototype

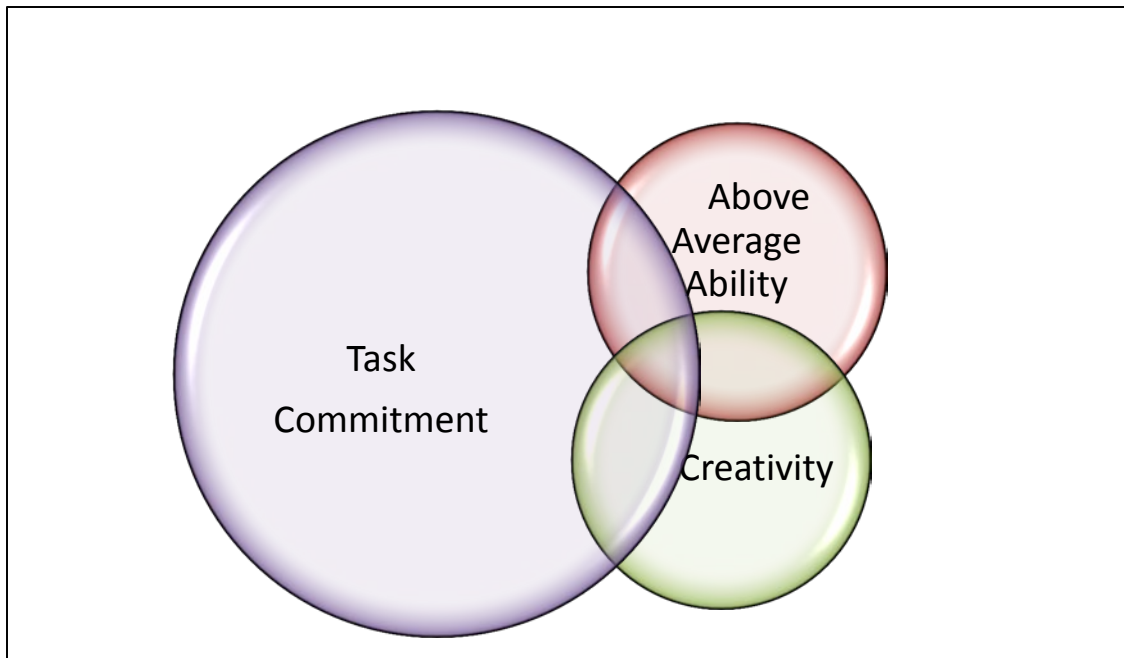


Figure 6. Applied Three-Ring Conception of Giftedness among Overcontrolled Personality Prototype

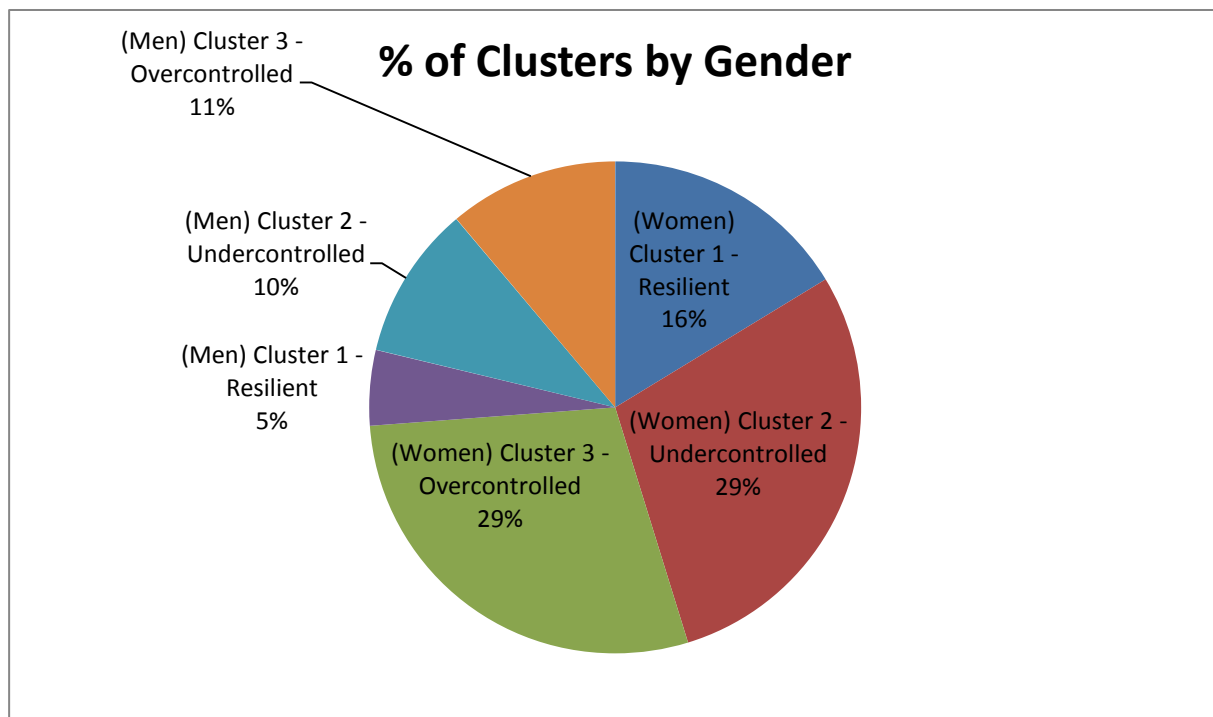


Figure 7. Percentages of the Cluster Breakdown by Gender

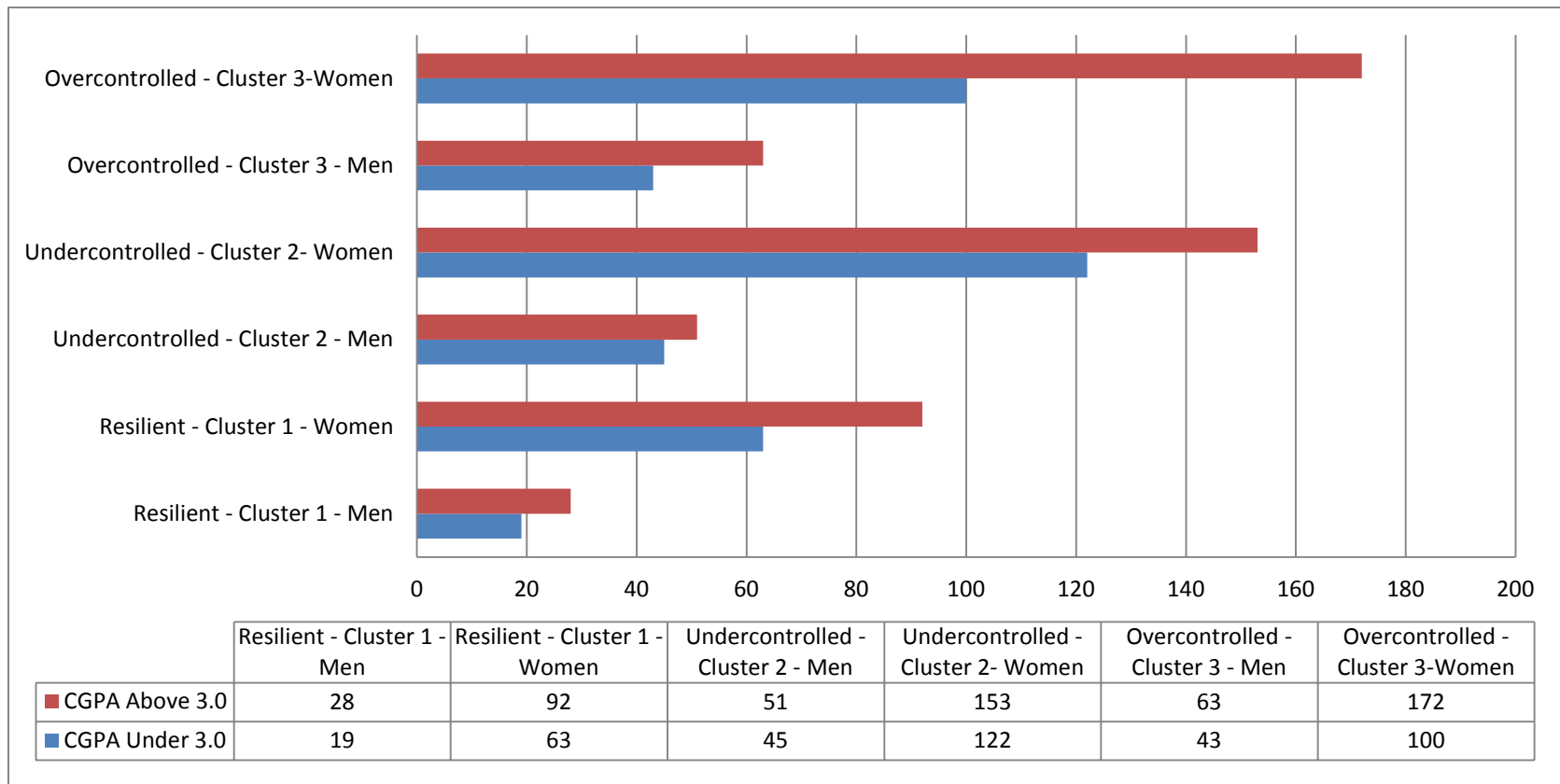


Figure 8. Clusters by Gender, Above and Below 3.0 CGPA

\*Note: Represents only the general pattern. Is not meant to imply a significant interaction (Gender x Cluster) effect.



**APPENDIX B**

Table 1. Final Cluster Centers

Final Cluster Centers of Raw Scores			
	Cluster		
	1	2	3
WPI Achievement /Effort Raw Score	39.76	33.67	37.25
WPI Adaptability Raw Score	34.79	27.65	29.98
WPI Analytical Raw Score	27.42	23.26	24.89
WPI Detail Raw Score	34.35	28.36	30.86
WPI Concern Raw Score	38.51	32.20	34.69
WPI Cooperation Raw Score	44.31	37.59	41.01
WPI Dependability Raw Score	33.86	27.49	30.89
WPI Independence Raw Score	22.77	22.64	22.96
WPI Initiative Raw Score	35.88	28.45	31.58
WPI Integrity Raw Score	30.22	24.72	27.33
WPI Innovation Raw Score	33.01	28.36	30.32
WPI Leadership Raw Score	31.97	27.28	28.95
WPI Persistence Raw Score	33.93	26.35	30.42
WPI Social Orientation Raw Score	31.20	26.70	28.17
WPI Self-Control Raw Score	31.67	24.86	28.11
WPI Stress Tolerance Raw Score	34.36	27.01	30.03

N = 951

Table 2. Workplace Personality Inventory List of Relevant Behaviors

WORK STYLE DOMAIN	WORK STYLE	RELEVANT BEHAVIORS
<b>Achievement Orientation</b>	Achievement/Effort	1. Establishes challenging goals 2. Maintains goals 3. Exerts effort toward task mastery
	Persistence	1. Persists in the face of obstacles on the job
	Initiative	1. Takes on job responsibilities without being told to do so 2. Volunteers for new job responsibilities 3. Volunteers for new job challenges
<b>Social Influence</b>	Leadership Orientation	1. Demonstrates a willingness to lead/take charge 2. Demonstrates a willingness to offer opinions
<b>Interpersonal Orientation</b>	Cooperation	1. Is pleasant/good-natured with others on the job 2. Encourages people to work together 3. Helps others with tasks
	Concern for Others	1. Demonstrates sensitivity to the needs and feelings of others 2. Demonstrates understanding of others/empathy
	Social Orientation	1. Shows a preference for working with others 2. Develops personal connections with work colleagues
<b>Adjustment</b>	Self-Control	1. Keeps emotions in check even in very difficult situations
	Stress Tolerance	1. Accepts criticism 2. Shows tolerance of stress caused by other people or situations
	Adaptability/Flexibility	5. Adapts to change in the workplace 6. Deals effectively with ambiguity 7. Demonstrates openness to considerable variety in the workplace
<b>Conscientiousness</b>	Dependability	1. Fulfills obligations reliably
	Attention to Detail	1. Completes work tasks thoroughly 2. Is careful about details
	Integrity/Rule Following	1. Avoids unethical behavior 2. Follows rules and regulations
<b>Independence</b>	Independence	1. Relies mainly on self to get things done 2. Develops own way of doing things
<b>Practical Intelligence</b>	Innovation	1. Generates new ideas to address work issues and problems
	Analytical Thinking	1. Uses logic to address work-related issues 2. Produces high quality, useful information.

As cited in Chartrand, Yang, and Filgo (2009). Utility and Validity of O\*NET's Work Styles Taxonomy. Paper presented at the 2009 meeting for the Society of Industrial Organizational Psychology, New Orleans.

Table 3. Frequencies by Cluster

<b>Cluster Group</b>	<b>Cluster # of Cases</b>	<b>% of Total</b>
Cluster 1 - Resilient	202	21 %
Cluster 2 - Undercontrolled	371	39 %
Cluster 3 - Overcontrolled	378	40 %
<b>Totals</b>	<b>951</b>	<b>100%</b>

Table 4. Main and Interaction Effects Between CGPA, Gender, and Clusters

Tests of Between-Subjects Effects								
Dependent Variable: CGPA								
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power <sup>a</sup>
Intercept	Hypothesis	6263.643	1	6263.643	20111.015	.000	1.000	1.000
	Error	.663	2.130	.311 <sup>b</sup>				
<b>Gender</b>	Hypothesis	.296	1	.296	11.243	<b>.020</b>	.693	.763
	Error	.131	4.980	.026 <sup>c</sup>				
<b>QCL_1</b>	Hypothesis	.647	2	.323	18.103	<b>.05</b>	.948	.616
	Error	.036	2	.018 <sup>d</sup>				
Gender * QCL_1	Hypothesis	.036	2	.018	.123	.884	.000	.069
	Error	136.775	945	.145 <sup>e</sup>				

(a) Computed using alpha = .05; (b) .933 MS (QCL\_1) + .067 MS (Error); (c) .933 MS (Gender \* QCL\_1) + .067 MS (Error); (d) MS (Gender \* QCL\_1); (e) MS (Error).

Table 5. Mean and Standard Deviation of CGPA by Gender and Cluster

Descriptive Statistics				
Gender	Cluster Number of Case	Mean CGPA	Std. Deviation	N
<b>Women</b>	Resilient – Cluster 1	3.119	.3612	155
	Undercontrolled – Cluster 2	3.070	.3839	275
	<i>Overcontrolled – Cluster 3</i>	<b>3.146</b>	.3893	272
	Total	3.110	.3820	702
<b>MEN</b>	<i>Resilient – Cluster 1</i>	<b>3.092</b>	.3793	47
	Undercontrolled – Cluster 2	3.032	.3793	96
	Overcontrolled – Cluster 3	3.084	.3776	106
	Total	3.065	.3780	249
<b>Total</b>	Resilient – Cluster 1	3.113	.3647	202
	Undercontrolled – Cluster 2	3.060	.3825	371
	<i>Overcontrolled – Cluster 3</i>	<b>3.128</b>	.3865	378
	Total	3.099	.3813	951

Table 6. Two-Step Centers – Means and Standard Deviation

		Centroids		
		Cluster		
		1	2	3
WPI Achievement Raw Score	Mean	39.7574	33.6685	37.2513
	Std. Deviation	2.25833	2.58176	2.38981
WPI Adaptability Raw Score	Mean	34.7921	27.6496	29.9815
	Std. Deviation	2.82954	2.62650	2.61848
WPI Analytical Raw Score	Mean	27.4208	23.2561	24.8862
	Std. Deviation	2.23187	2.06821	2.00801
WPI Detail Raw Score	Mean	34.3515	28.3558	30.8624
	Std. Deviation	2.73911	2.88568	2.96525
WPI Concern Raw Score	Mean	38.5149	32.1995	34.6878
	Std. Deviation	3.31622	2.90165	2.85232
WPI Cooperation Raw Score	Mean	44.3069	37.5876	41.0132
	Std. Deviation	2.14287	2.68826	2.57355
WPI Dependability Raw Score	Mean	33.8564	27.4852	30.8889
	Std. Deviation	1.95068	2.41206	2.36763
WPI Independence Raw Score	Mean	22.7723	22.6388	22.9630
	Std. Deviation	3.38531	2.61265	2.54898
WPI Initiative Raw Score	Mean	35.8762	28.4528	31.5767
	Std. Deviation	2.42079	2.15853	2.42242
WPI Integrity Raw Score	Mean	30.2228	24.7197	27.3254
	Std. Deviation	3.50052	2.68471	3.15092
WPI Innovation Raw Score	Mean	33.0149	28.3612	30.3175
	Std. Deviation	3.06233	3.19188	2.98889
WPI Leadership Raw Score	Mean	31.9703	27.2776	28.9524
	Std. Deviation	3.19189	3.18374	2.99564
WPI Persistence Raw Score	Mean	33.9307	26.3531	30.4180
	Std. Deviation	1.72345	2.13386	2.30784
WPI Social Orientation Raw Score	Mean	31.1980	26.6981	28.1746
	Std. Deviation	3.05186	3.07922	3.07574

Table 6. continued

		Centroids		
		Cluster		
		1	2	3
WPI Self-Control Raw Score	Mean	31.6733	24.8571	28.1058
	Std. Deviation	2.65273	2.59700	2.69972
WPI Stress Tolerance Raw Score	Mean	34.3614	27.0135	30.0344
	Std. Deviation	3.17689	2.89591	2.95436



Table 7. Post Hoc Testing

Tukey HSD

Dependent Variable: Cumulative GPA

		(J) (I) Cluster Number of Case	Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
<b>Tukey HSD</b>	1		2	.0520	.0333	.262	-.026	.130
			3	-.0158	.0332	.883	-.094	.062
	2		1	-.0520	.0333	.262	-.130	.026
			3	-.0678*	.0278	<b>.040</b>	-.133	-.003
	3		1	.0158	.0332	.883	-.062	.094
			2	.0678*	.0278	<b>.040</b>	.003	.133

\*. The mean difference is significant at the 0.05 level.

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